

FOR NATIONAL PHASE SUBMISSION

2

CLAIM AMENDMENTS

WHAT IS CLAIMED IS:

This listing of the claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A Ffluid injector ~~with comprising~~ a housing-(1), a valve body-(2) and an actuator unit-(3), that is inserted into the housing, ~~with~~ wherein the valve body-(2) ~~comprises~~ esing a cartridge-(21) with a recess-(211), that takes in a needle-(22), a hollow body-(23), which is arranged in a fixed position to the needle-(22) and forms a first spring rest-(231), a valve cap-(26), which takes in the cartridge-(21) and forms a second spring rest-(261), and a return spring-(25), that rests on one hand on the first spring rest-(231) and on the other hand on the second spring rest-(231), ~~with~~ wherein the valve cap -(26), the housing-(1) and the cartridge-(21) being formed such, that before the valve cap-(26) and the housing-(1) and the valve cap-(26) and the cartridge-(21) are permanently fixed to each other the valve cap-(26) is moveable relative to the housing-(1) and the cartridge-(21) while the housing-(1) and the cartridge -(21) stay in a fixed position relative to each other.

2. (Currently Amended) A Ffluid injector ~~in accordance with according to~~ claim 1, ~~wherein with~~ the valve cap-(26) or the cartridge-(21) ~~comprises~~ esing a first sealing element-(27), which seals the connection between the valve cap-(26) and the cartridge-(21).

FOR NATIONAL PHASE SUBMISSION

3

3. (Currently Amended) A fluid injector according to claim 1, wherein in accordance with one of the preceding claims ~~with~~ the housing-(1) or the valve cap-(26) comprising a second sealing element-(28), which seals the connection between the housing-(1) and the valve cap-(26).

4. (Currently Amended) A fluid injector according to claim 1, wherein in accordance with one of the preceding claims ~~with~~ the valve cap-(26) comprising a thread-(262) and the housing-(1) comprising a corresponding thread-(12) and the valve cap-(26) being threaded into the thread of the housing.

FOR NATIONAL PHASE SUBMISSION

4

5. (Currently Amended) A ~~M~~method for manufacturing a fluid injector with a housing-(1), a valve body-(2) and an actuator unit-(3), that is inserted into the housing-(1), with the valve body-(2) comprising a cartridge-(21) with a recess -(211), that takes in a needle-(22), a hollow body-(23), which is arranged in a fixed position to the needle-(22) and forms a first spring rest-(231), a valve cap-(26), which takes in the cartridge-(21) and forms a second spring rest-(261), a return spring-(25), that rests on one hand on the first spring rest -(231) and on the other hand, on the second spring rest-(261), with the valve cap-(26), the housing-(1) and the cartridge-(21) being formed such, that before the valve cap-(26) and the housing-(1) and the valve cap-(26) and the cartridge-(21) are permanently fixed to each other the valve cap-(26) is moveable relative to the housing-(1) and the cartridge-(21) while the housing-(1) and the cartridge-(21) stay in a fixed position relative to each other, with the steps of:

- calibrating the fluid flow characteristics of the fluid injector by moving the valve cap-(26) and thereafter ~~that~~
- permanently fixing the valve cap-(26) to the housing-(1) and to the cartridge-(21).

FOR NATIONAL PHASE SUBMISSION

5

6. (NEW) A fluid injector comprising:  
a housing,  
an actuator unit arranged within the housing,  
a cartridge with a recess and a needle arranged in the  
recess,  
a hollow body arranged in a fixed position to the needle  
and forming a first spring rest,  
a valve cap in which the cartridge is arranged and forming  
a second spring rest, and  
a return spring resting on the first and second spring  
rest, wherein the valve cap, the housing and the cartridge being  
formed such, that before the valve cap and the housing and the  
valve cap and the cartridge are permanently fixed to each other  
the valve cap is moveable relative to the housing and the  
cartridge while the housing and the cartridge stay in a fixed  
position relative to each other.

7. (NEW) A fluid injector according to claim 6, wherein  
the valve cap or the cartridge comprises a first sealing  
element, which seals the connection between the valve cap and  
the cartridge.

8. (NEW) A fluid injector according to claim 6, wherein  
the housing or the valve cap comprise a second sealing element,  
which seals the connection between the housing and the valve  
cap.

9. (NEW) A fluid injector according to claim 6, wherein  
the valve cap comprises a thread and the housing comprises a  
corresponding thread and the valve cap being threaded into the  
thread of the housing.